

## SANTA CLARA RIVER WATERSHED

This watershed was targeted for permitting purposes in FY01/02.

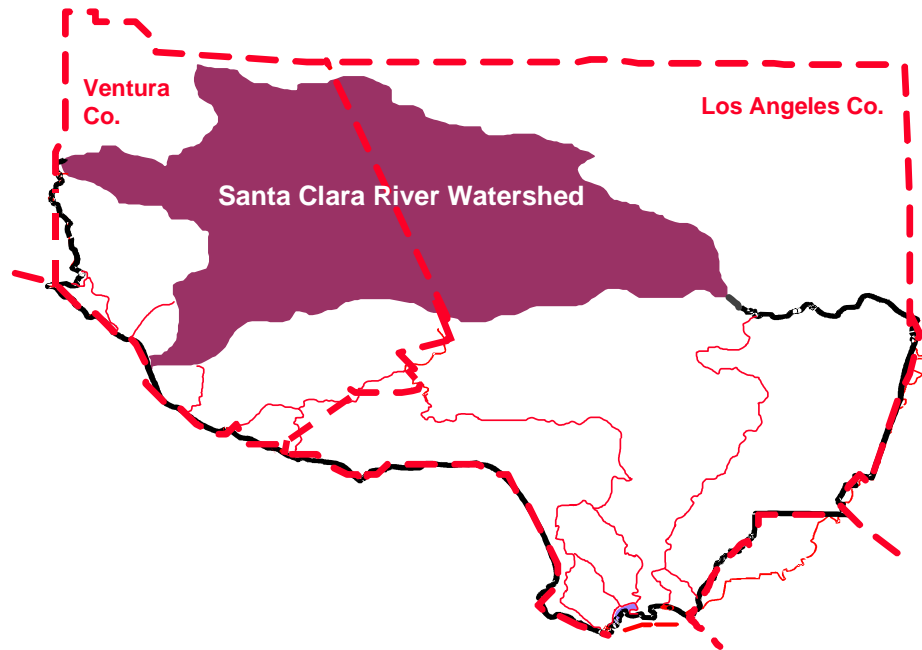
### Overview of Watershed

*Size of watershed:  
approximately 1,200  
sq. mi.*

*Length of river:  
approximately 100  
miles*

The Santa Clara River is the largest river system in southern California that remains in a relatively natural state; this is a high quality natural resource for much of its length. The river originates in the northern slope of the San Gabriel Mountains in Los

Angeles County, traverses Ventura County, and flows into the Pacific Ocean halfway between the cities of San Buenaventura and Oxnard.



Extensive patches of high quality riparian habitat are present along the length of the river and its tributaries. The endangered fish, the unarmored stickleback, is resident in the river. One of the largest of the Santa Clara River's tributaries, Sespe Creek, is designated a wild trout stream by the state of California and supports significant spawning and rearing habitat. The Sespe Creek is also designated a wild and scenic river. Piru and Santa Paula Creeks, which are tributaries to the Santa Clara River, also support good habitats for steelhead. In addition, the river serves as an important wildlife corridor. A lagoon exists at the mouth of the river and supports a large variety of wildlife.

#### **Beneficial Uses in watershed:**

##### Estuary

Contact & noncontact water recreation  
Wildlife habitat  
Preservation of rare & endangered species  
Migratory habitat  
Wetlands habitat  
Spawning habitat  
Estuarine habitat  
Marine habitat  
Navigation  
Commercial & sportfishing

##### Above Estuary

Contact & noncontact water recreation  
Wildlife habitat  
Preservation of rare & endangered species  
Migratory habitat  
Wetlands habitat  
Municipal supply  
Industrial service supply  
Industrial process supply  
Agricultural supply  
Groundwater recharge  
Freshwater replenishment  
Warmwater habitat  
Coldwater habitat

## Water Quality Problems and Issues

Increasing loads of nitrogen and salts in supplies of ground water threaten beneficial uses including irrigation and drinking water. Other threats to water quality include increasing development in floodplain areas which has necessitated flood control measures such as channelization that results in increased runoff volumes and velocities, erosion, and loss of habitat. In many of these highly disturbed areas the exotic giant reed (*Arundo donax*) is gaining a foothold.

Many of the smaller communities in this watershed remain unsewered. In particular, in the Agua Dulce area of the upper watershed, impacts on drinking water wells from septic tanks is a major concern. The community is undertaking a wellhead protection effort, with oversight by Board staff. Development pressure, particularly in the upper watershed, threatens habitat and the water quality of the river. The effects of septic system use in the Oxnard Forebay area is also of concern.

### **Permitted discharges:**

- 47 NPDES discharges
- Four major discharges (POTWs, (one discharging to estuary, one to middle reaches, two into upper watershed)
- 13 minor discharges
- 30 discharges covered under general permits
- 72 dischargers covered under an industrial storm water permit
- 188 dischargers covered under a construction storm water permit

### Types of permitted wastes discharged into the Santa Clara River Watershed:

Nature of Waste <i>Prior</i> to Treatment or Disposal	# of Permits	Types of Permits
Nonhazardous (designated) contaminated groundwater	2	Minor
	2	General
Nonhazardous (designated) wastes from dewatering, rec. lake overflow, swimming pool wastes, water ride wastewater, or groundwater seepage	5	Minor
	6	General
Nonhazardous (designated) noncontact cooling water	1	Minor
Nonhazardous (designated) process waste (produced as part of industrial/manufacturing process)	2	Minor
Nonhazardous (designated) stormwater runoff	1	Minor
Hazardous contaminated groundwater	1	Minor
	1	General
Nonhazardous (designated) domestic sewage & industrial waste	4	Major
	1	Minor
Nonhazardous (designated) washwater waste (photo reuse washwater, vegetable washwater)	1	General
Nonhazardous wastes from dewatering, rec. lake overflow, swimming pool wastes, water ride wastewater, or groundwater seepage	2	General
Inert wastes from dewatering, rec. lake overflow, swimming pool wastes, water ride wastewater, or groundwater seepage	18	General

**Hazardous** wastes are those influent or solid wastes that contain toxic, corrosive, ignitable, or reactive substances (prior to treatment or disposal) managed according to applicable Department of Health Services standards

**Designated** wastes are those influent or solid wastes that contain **nonhazardous** wastes (prior to treatment or disposal) that pose a significant threat to water quality because of their high concentrations

**Nonhazardous** wastes are those influent or solid wastes that do not contain soluble pollutants or organic wastes (prior to treatment or disposal) and have little adverse impact on water quality

**Inert** wastes are those influent or solid wastes that do not contain soluble pollutants or organic wastes (prior to treatment or disposal) and have little adverse impact on water quality

Major discharges are POTWs with a yearly average flow of over 0.5 MGD or an industrial source with a yearly average flow of over 0.1 MGD and those with lesser flows but with acute or potential adverse environmental impacts.

Minor discharges are all other discharges that are not categorized as a Major. Minor discharges may be covered by a general permit, which are issued administratively, for those that meet the conditions specified by the particular general permit.

Thirty-three of the 47 NPDES dischargers go into the mainstem of the Santa Clara River while the rest discharge to various tributaries.

Of the 72 dischargers enrolled under the general industrial storm water permit in the watershed, the largest numbers are located in the cities of Santa Paula and Valencia. Many of these businesses are involved with auto wrecking and food packing. A similar number of sites are located in the upper and lower watershed. Fifty-eight of the facilities are larger than one acre in size while twenty-four are larger than ten acres in size.

There are currently 188 sites enrolled under the construction storm water permit; the majority of these sites are located in the upper watershed, especially within the cities of Santa Clarita and Valencia. The majority of these are sites 10 acres or larger in size.

**IMPAIRMENTS:** Limited data (beyond mineral quality and nitrogen) is available for much of the Santa Clara River. The Santa Clara River Estuary and Beach is on the 1998 303(d) list for coliform while a portion of the river upstream of the estuary is listed for ammonia and coliform. Portions of the river have chloride exceedances. The Estuary is also listed for DDT in fish tissue. Two small lakes in the watershed are also on the 1998 303(d) list for eutrophication, trash, DO, and pH problems. Two major spills of crude oil into the river have occurred in the early 1990s although recovery has been helped somewhat by winter flooding events. Natural oil seeps discharge significant amounts of oil into Santa Paula Creek.

The table below gives examples of typical data ranges which led to the listings.

Impairments	Applicable Objective/Criteria	Typical Data Ranges Resulting in Impairment	303(d) Listed Waters/Reaches
chloride	Basin Plan numeric objective: 80 – 100 mg/l	10 – 138 mg/l (mean of 105 ± 21)	Santa Clara River Reach 9 (Bouquet Cyn Rd to abv Lang Gaging) Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd Bridge) Santa Clara River Reach 7 (Blue Cut to West Pier Hwy 99) Santa Clara River Reach 3 (Dam to abv SP Crk./blw Timber Cyn)
ammonia	Basin Plan narrative objective  Basin Plan numeric objective: varies depending on pH and temperature but the general range is 0.53 – 2.7 mg/l of total ammonia (at average pH and temp.) in waters designated as WARM to protect against chronic toxicity and 2.3 – 28.0 mg/l to protect against acute toxicity	ND – 4.9 mg/l (mean of 1.4 ± 1.3)	Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd Bridge) Santa Clara River Reach 7 (Blue Cut to West Pier Hwy 99) Santa Clara River Reach 3 (Dam to abv SP. Crk./blw Timber Cyn)
nitrate + nitrite	Basin Plan numeric objective: no greater than 10 mg/l	0.3 – 15.4 mg/l (mean of 5.7 ± 2.4)	Wheeler Canyon/Todd Barranca Torrey Canyon Creek Brown Barranca/Long Canyon Mint Canyon Creek Reach 1 Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd Bridge)

Impairments	Applicable Objective/Criteria	Typical Data Ranges Resulting in Impairment	303(d) Listed Waters/Reaches
org. enrichment/ low DO	Basin Plan narrative objective  Basin Plan numeric objective: annual mean greater than 7.0 mg/l no single sample less than 5.0 mg/l	0.8 – 11.0 mg/l (mean of 7.7 ± 2.5)	Santa Clara River Reach 9 (Bouquet Cyn Rd to abv Lang Gaging) Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd Bridge) Elizabeth Lake
pH	Basin Plan numeric objective:  6.5 – 8.5 pH units	7.3 – 9.6 pH units (mean of 8.5 ± 0.7)	Elizabeth Lake
odors	Basin Plan narrative objective		Lake Hughes
coliform	Basin Plan numeric objective:  Inland: fecal coliform not to exceed log mean of 200 mpn/100ml in 30-day period and not more than 10% of samples exceed 400 MPN/100ml Beaches: total coliform not to exceed 1,000 MPN/100ml in more than 20% of samples in 30 days and not more than 10,000 MPN/100ml at any time	20 – 24000 MPN/100ml	Santa Clara River Reach 8 (W Pier Hwy 99 to Bouquet Cyn Rd Bridge) Santa Clara River Estuary
sulfate	Basin Plan numeric objective: 150 mg/l		Santa Clara River Reach 9 (Bouquet Cyn Rd. to abv Lang Gaging)
Eutrophication	Basin Plan narrative objective		Elizabeth Lake Lake Hughes Munz Lake
algae	Basin Plan narrative objective		Lake Hughes
fish kills	Basin Plan narrative objective		Lake Hughes
trash	Basin Plan narrative objective		Elizabeth Lake Munz Lake Lake Hughes
ChemA*	National Academy of Science Guideline (tissue): 100 ng/g		Santa Clara River Estuary
toxaphene	State Board numeric objective (tissue): Max. Tissue Residue Level 8.8 ng/g		Santa Clara River Estuary

ChemA refers to the sum of the chemicals aldrin, dieldrin, Chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene

### *CURRENTLY SCHEDULED TMDLS:*

Type of TMDL	Listed Waters/Reaches in TMDL	Year Scheduled for Completion (FY)
chloride	Santa Clara River Reaches 3, 7, and 8	01/02
nitrogen	Santa Clara River Reaches 3, 7, and 8 Wheeler Canyon/Todd Barranca Torrey Canyon Creek Brown Barranca/Long Canyon Mint Canyon Creek Reach 1	02/03
eutrophication	Elizabeth Lake Munz Lake Lake Hughes	04/05
trash	Elizabeth Lake Munz Lake Lake Hughes	04/05
coliform	Santa Clara River Reaches 8 and 9 Santa Clara River Estuary Santa Clara River Estuary Beach/Surfers Knoll	05/06

**We see a need for an additional 2.2 PYs as well as \$100,000 in contract dollars for FY02/03 TMDL work conducted in this watershed.**

## **Stakeholder Groups**

*Santa Clara River Enhancement and Management Plan Steering Committee* The 26-member Project Steering Committee is currently directing preparation of an Enhancement and Management Plan. The Committee consists of representatives of the following individuals and agencies:

Acton Town Council * Aggregate Producers Agriculture/Private Land Ownership Beach Erosion Authority for Operations & Nourishment * Castaic Lake Water Agency Cities of Fillmore/Santa Paula * City of Oxnard City of San Buenaventura * City of Santa Clarita * County of Ventura – Resource Management Agency * Friends of the Santa Clara River * (environmental organization umbrella group) Los Angeles County Flood Control District * Los Angeles County Sanitation District	Los Angeles Department of Regional Planning – APIS Newhall Land & Farming Company Santa Clara Valley Property Owners Association State of California Coastal Conservancy * State of California Department of Fish and Game * State of California Department of Parks and Recreation * State of California Department of Transportation * - District 7 State of California Water Quality Control Board – L.A. Region * United Water Conservation District U.S. Army Corps of Engineers * U.S. Fish & Wildlife Service * Valley Advisory Committee Ventura County Flood Control District *
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- Additionally indicated support for the river study by signing a Memorandum of Cooperation

Six subcommittees worked with a consultant to collect the information necessary for a river management plan: agriculture, flood control, water resources, aggregate industry, recreation, and biology were the areas focused on. These subcommittees worked on determining river dynamics and areas where the interests of diverse groups overlap along the river; the critical issues areas were identified. Reports were developed by the subcommittees that provide background information, goals, and recommendations for the river on the issue areas. A series of computer-based maps have been produced, which are currently being used in a GIS overlay process to identify conflicts and opportunities and facilitate decisions regarding use of the river floodplain. The stakeholder are currently looking for a consultant to put together a CEQA document for a watershed plan.

*Friends of the Santa Clara River* This non-profit stakeholder group has been involved with watershed activities along the length of the river with a focus on the protection, enhancement, and management of the river's resources. More information about this group may be found at their website <http://www.FSCR.org>.

*Santa Clarita Organization for Planning the Environment (SCOPE)* This group has been involved with educating the public about planning and environmental issues, including those involving the river, particularly in the area around the Santa Clarita Valley. More information about this group may be found at their website <http://www.scope.org/>.

*Santa Clara Estuary Work Group* This group has been meeting over the past year and includes staff from the Regional Board, California Department of Fish and Game, California State Parks - Channel Coast District, and the Ventura Water Reclamation Plant. A Natural Resources Management Plan is being prepared for the State Parks land in and around the estuary and these entities are most involved with water quality and habitat issues as well as monitoring. The projected deadline for completion of the Plan is 2002.

### **Significant Past Activities**

**Santa Clara River Enhancement and Management Plan** development evolved as the result of the efforts of former Ventura County Supervisor Maggie Kildee, representatives of the Ventura Office of the U.S. Fish and Wildlife Service, and grant funding provided by the State Coastal Conservancy. As far back as 1991, it was becoming apparent that the many proposed and conflicting uses of the river were heading for problems of rather large proportions unless the agencies that regulated the river and the various stakeholders along the river agreed on a consensus plan to manage the river and its resources. The increasingly complex regulatory process along the river, involving protection of river ecology and natural processes, was becoming a more difficult environment for stakeholders wishing to stabilize banks, develop urban projects, or mine river aggregate deposits. The river is a very complex natural system and agencies had been forced to be very conservative in analysis of projects because of incomplete understanding of the river's ecological processes. Large instream aggregate mining projects which had been proposed, plus several urban development projects in the making, led to the feeling that a giant "train wreck" was in store for the Santa Clara River. The options were to keep doing business-as-usual approaches, or to work together to develop a coordinated conservation plan for the river. Therefore, in 1991, Supervisor Kildee invited all concerned parties to participate in initiating the Plan. A Project Steering Committee was formed. Since that time, funding for consulting services associated with Plan development, totaling \$510,000 to date, has been provided by the Coastal Conservancy, the State Wildlife Conservation Board, the U.S. Fish and Wildlife Service, the Cities of Santa Clarita and San Buenaventura, and both Ventura and Los Angeles County Flood Control Districts. In addition, a great deal of staff time and in-kind services have been contributed to this planning effort. This project also formed the primary basis for nomination of the Santa Clara River as an American Heritage River. Although the river is still under consideration, it has not yet been designated.

The Steering Committee began by identifying the river's critical issue areas. Reports were developed by subcommittees that provide background information, goals and recommendations for the river on the issue areas. A series of computer-based maps have been produced, which are currently being used in a Geographic Information Systems (GIS) overlay process to identify conflicts and opportunities and facilitate decisions regarding use of the river floodplain.

The Steering Committee initially identified nine main categories of critical resource issue areas and, over the past two years, subcommittees covering Biological Resources, Recreation, Water Resources, and Aggregate Mining have each developed reports providing background information, and goals and recommendations for their respective areas. In addition, two reports covering the History of the Santa Clara River and the Cultural Resources of the River have been published.

In April 1999, the Project Steering Committee released preliminary river-wide and reach-specific recommendations for public comment. River-wide recommendations include those involving issues such as public outreach, private property rights, water quality, water rights, saltwater intrusion, water supply, river gradient, public flood protection facilities, maintenance of design flow capacity, private flood protection, cultural resource protection, fish passage, habitat conservation priorities, biological management, control of exotics, biological mitigation, public access and recreation, recreational property acquisition, and permit streamlining.

The group has also developed draft resource-based ranking criteria for parcel acquisition. There is one such parcel acquisition, funded by the State Coastal Conservancy, currently being pursued. The proposed acquisition includes 213 acres of river bottom, river terrace, and riparian habitat.

Staff will remain involved with the Plan's development and implementation. During the fall of 1999, the Project Steering Committee reviewed proposals from consultants to prepare a CEQA document for the Plan for the river.

One downside to this effort is that the study and plan were limited to the mainstem of the river, not the tributaries or other watershed areas outside of the 100-year floodplain. If additional resources can be found, the study area can be expanded throughout the watershed. This will increase the chance of successful protection of this watershed.

**Other important community-based efforts** include Ventura County's Agriculture Policy Working Group's Agricultural Land Preservation Program, the Heritage Valley Tourism Development Program, Santa Clara River Valley Historic/Cultural Preservation Programs and the City of Santa Clarita's River Corridor Plan.

In 1990, the Regional Board adopted Resolution No. 90-004 (**Drought Policy**) which had a term of three years and provided interim relief to dischargers who experienced difficulty meeting chloride objectives because of a state-wide drought. The policy adjusted effluent limits to the lesser of 1) 250 mg/l or 2) the chloride concentration in the water supply plus 85 mg/l. In 1995, the Regional Board extended the interim limits for three years and directed staff to develop a long-term solution to deal with the impact of changing water supply, especially during droughts. In 1997, the Regional Board adopted Resolution No. 97-002 (**Chloride Policy**) which set the chloride objective at 190 mg/l except in the Calleguas Creek and Santa Clara River Watersheds where, due to the great concern for protection of agriculture, staff were directed to determine the chloride concentrations sufficient to protect agricultural beneficial uses.

### **Current Activities**

#### ***CORE REGULATORY***

Continuing core regulatory activities that will be integrated into the watershed management approach include (but are not limited to) necessary renewal/revision of NPDES permits and issuance of new permits. Compliance inspections, review of monitoring reports, response to complaints, and enforcement actions relative to the watershed's NPDES permits will continue.

The one POTW discharging to the estuary conducted a limited-term receiving monitoring program to investigate whether toxic constituents (to be regulated under the CA Toxics Rule) are accumulating or bioaccumulating in the estuary. More work is planned with regards to evaluating effects on the estuary.

Additionally, most urban areas in Ventura County, including this watershed, are implementing Best Management Practices (BMPs) under the Municipal Storm Water Permit (revised in 2000). The "Discharger" consists of the co-permittees Ventura County Flood Control District, the County of Ventura, and the Cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley, and Thousand Oaks. The Discharger is required to implement the Ventura Countywide Stormwater Quality Urban Impact Mitigation Plan (SQUIMP), which requires the implementation of BMPs to reduce the discharge of pollutants in storm water from new development and significant redevelopment. Other requirements of the Municipal Storm Water Permit include a public education program, an educational site inspection program for industrial and commercial facilities, program for construction sites, public agency activities, and a storm water monitoring program.

The storm water monitoring program has consisted of land-use based monitoring, receiving water and mass emission station monitoring, and bioassessment. The Discharger also participates in regional monitoring activities, such as the Storm Water Monitoring Coalition, organized by the Southern California Coastal Water Research Project. Furthermore, the Discharger participates in the development and implementation of volunteer monitoring programs in the Ventura Coastal watersheds.

The Santa Clara River receives municipal storm drain discharges from the City of Fillmore, City of Oxnard (part), City of San Buenaventura (part), City of Santa Paula, and unincorporated Ventura County (part).

### *MONITORING AND ASSESSMENT*

The Santa Clara River was a focus for SWAMP monitoring (Phase I) in FY00/01. Phase II work will occur in FY01/02. Monitoring in this watershed emphasizes stratified random sampling with the strata represented by stretches of river or tributary immediately upstream of confluences. Biological assessment work is a major component of the program.

The upper Santa Clara River is monitored by the County Sanitation Districts of Los Angeles County under NPDES permits for the Saugus and Valencia treatment plants. Somewhat downstream, between the towns of Piru and Saticoy, water quality in the surface and groundwater is monitored by United Water Conservation District. Mid-river receiving water data is provided by the City of Santa Paula treatment plant under an NPDES permit and occasionally by the City of Fillmore when they discharge to surface waters under an NPDES permit. Otherwise, the City of Fillmore provides groundwater data that has not yet been integrated into the watershed picture. At the river's terminus, some water quality data is available from the City of San Buenaventura under NPDES permit for discharge to ponds adjacent to the river. The monitoring supports compliance evaluation; it is not part of a program for nonpoint source identification or TMDL development. In conjunction with the receiving water monitoring, land-use based monitoring is carried out as part of the Ventura County Municipal Storm Water Program. There is a long stretch of the middle river (surrounded by private property) that has had little to no monitoring because of limited access. Additionally, the Regional Board monitored a number of locations in the river and its tributaries until fairly recently when funding levels were reduced. The Regional Board periodically conducts TSMP sampling in the Santa Clara River Estuary and at selected locations within the river.

California State University, Fullerton, under contract with the Regional Board, completed a GIS-based project in the watershed during 2001 which involved verifying with Global Positioning Satellite (GPS) previous Regional Board sampling locations in the river. Digital photos and video of the locations were also taken and aerial photos were also taken. This information will augment the existing Regional Board GIS for that watershed.

In addition, efforts to study impacts of chloride on groundwater supplies will require ongoing monitoring. A MOU has been prepared by staff and has been signed by several key stakeholders interested in this issue.

Ground water data are being collected by a number of agencies and should be compiled by the Fox Canyon Groundwater Management Agency. We should be acquiring some of this data over the next two years for use in our analysis of the Oxnard Plain nonpoint source contamination problems.



UCLA is under contract with the State Board to provide data needed for establishment of nutrient TMDLs in several watersheds within the Region including Calleguas Creek, Santa Clara River, and Malibu Creek. By understanding the inter-relationships between water quality and habitat condition and the resulting effects that these interactions have on the biological communities of coastal watersheds, this research will further our understanding of the ecology of southern California watersheds. Besides providing information supporting the establishment of nutrient TMDLs for these three impaired coastal watersheds, the data collected may provide insight into how these TMDLs might be complied with in the future. Three specific objectives of this project are: 1) investigate the relationships between water quality (e.g. nutrients), habitat quality, and the biological community, 2) investigate how water quality and biological communities change throughout particular target reaches representing different land uses, and 3) compare the relationships between water quality, habitat quality, and biological communities among different watersheds. The work is a continuation and extension of a Regional Environmental Monitoring and Assessment Program (R-EMAP) project in the Calleguas Creek Watershed. R-EMAP is part of a larger national effort by the USEPA to assess the condition of the nation's ecological resources.

#### *WETLANDS PROTECTION AND MANAGEMENT*

In June 2001, the Coastal Conservancy approved use of [Southern California Wetlands Recovery Project](#) funds for acquisition of several parcels at the mouth of the river (wetlands, dunes and former riparian areas at the estuary).

[The Santa Monica Mountains Conservancy](#) is a state agency created by the Legislature in 1979 charged with primary responsibility for acquiring property with statewide and regional significance, and making those properties accessible to the general public. The Conservancy manages parkland in the Santa Monica Mountains, Santa Susana Mountains, the Simi Hills, the Santa Clarita Woodlands, the Whittier-Puente Hills, the Sierra Pelona, the Los Angeles River Greenway, the Rio Hondo, the Verdugo Mountains, the San Gabriel Mountains, and the San Rafael Hills. The agency's goals are to: 1) implement the Santa Monica Mountains Comprehensive Plan, 2) implement the Rim of the Valley Trails Corridor Master Plan, 3) implement the Los Angeles County River Master Plan, 4) further cooperation with local governments in the region to secure open space and parkland, and 5) expand education, public access, and resource stewardship components in a manner that best serves the public, protects habitat, and provides recreational opportunities.

#### *NONPOINT SOURCE PROGRAM*

##### **Santa Clara River Enhancement and Management Plan**

A set of computer-based GIS maps have been developed to allow generation of a set of comparative overlay maps demonstrating the potential conflicting uses and compatible opportunities on each of 13 river reaches defined in the Plan. Layers were developed around the resource areas of water resources, flood protection, agricultural resources, aggregate resources, biological resources, cultural resources, recreation, and land use. Within each resource area, individual layers are being developed depicting selected parameters for comparison. For example, for biological resources, layers have been generated showing the various types of riparian vegetation, exotic species, and habitat values. The overlay analysis resulted in identification of the areas of greatest potential conflicts facing the river, and recommendations for addressing these issues, including (1) preserving and maintaining water conveyance and groundwater recharge functions of the river, (2) creating mitigation banks, enhancing significant

biological areas, and providing public access opportunities, (3) enhancing populations of threatened and endangered species on the river, with the goal of creating viable and sustainable populations, (4) enhancement and preservation of agricultural land, (5) mitigation of beach erosion issues, (6) implementation of flood protection and bank stabilization facilities, and (7) identification of areas appropriate for development and for sand and gravel extraction.

Two demonstration projects under consideration for funding by the Coastal Conservancy would utilize a GIS overlay process for 1) a bank stabilization project using bio-technical methods to promote reduced bank erosion while increasing wildlife habitat, and 2) creation of a mitigation bank on a unique portion of river terrace riparian habitat for the protection and enhancement of wildlife habitat

Additionally, the Ventura County Flood Control District has received partial funding in 2001 for a 205(j) proposal which will focus on the water resources portion of the draft management plan. The project will collect and review existing surface water quality data, evaluate beneficial uses of the river, determine data gaps, and develop a monitoring program. Currently, the water resources report has inadequate surface water quality data, focuses on a narrow group of constituents, and is outdate. Additional funding will be needed to implement the recommended monitoring. This information will then be used to update the water resources report including the water quality goals and plans to achieve them.

### **Regulatory-based Encouragement of Best Management Practices**

Currently under consideration are agreements with sister agencies in regulatory-based encouragement of Best Management Practices. Most notably is the use of a GIS layer for pesticides application available from the Department of Pesticide Regulation (DPR). Reduction of pesticides identified as contaminants of concern for a watershed might be addressed through a Management Agency Agreement (MAA) with the DPR, or through waiving adoption of waste discharge requirements on an individual basis using information gathered in databases provided by the Ventura County Agricultural Commission office.

Regulatory involvement with the Agua Dulce septic tank problems is currently at Tier I but is moving into Tier II. The rural community of Aqua Dulce is at the headwaters of the Santa Clara River in northern Los Angeles County. Previous studies have shown elevated nitrate levels in the groundwater due to animal wastes, septic systems, and some natural sources. Some drinking water wells are experiencing high levels of nitrate exceeding the MCL. The Regional Board requested the Aqua Dulce Town Council submit quarterly monitoring reports with a goal of testing 65 wells each quarter. Quarterly reports so far submitted have shown nitrate contamination.

### **Agriculture**

There are a number of 303(d)-listed impairments in the watershed which may be attributable in part to agricultural practices, notably salts and nitrogen related as well as movement of historic pesticides. We will be focussing our 319(h) priorities for the upcoming application period on a number of areas of concern in the Region including development of an agricultural “strategy”, education and outreach programs and implementation of management measures relative to nutrient management and erosion control.

## **Groundwater**

The Oxnard Forebay is a prime groundwater recharge area that is impacted by nitrogen discharges, mainly from densely populated communities using septic systems, and agricultural areas. The Regional Board undertook a study of septic systems in the area during FY98/99; in August 1999 the Board adopted a Basin Plan amendment to prohibit septic systems in the Oxnard Forebay. The amendment immediately prohibits the installation of new septic systems or the expansion of existing septic systems on lot sizes of less than five acres. Discharges from septic systems on lot sizes of less than five acres must cease by January 1, 2008. This prohibition will affect up to 3,000 septic systems and ten to fifteen thousand people.

### *BASIN PLANNING*

Chloride impairments in certain reaches of the river initially led to formation of a chloride committee to conduct a chloride TMDL. This stemmed from issues raised during development of a chloride policy for the region. Growers expressed concern about increased chloride and effects on salt-sensitive crops, such as avocados. Staff went to the Board in December 2000 with two resolutions: one to extend the interim chloride limitation for discharges to the river until December 7, 2001; the other to amend the Basin Plan chloride objective for certain reaches in the river. The Board adopted the extension of the interim limitation at the December meeting, raised the Basin Plan objectives in Reach #3 from 80 to 100 mg/l, and determined the chloride objective for chloride in reaches #7 and #8 should remain unchanged from 100 mg/l. Reaches #3, #7, and #8 are currently 303(d)-listed for chloride. Reach #3, now with a higher objective for chloride, may be considered for de-listing in 2002. The Board has directed staff to complete a chloride TMDL on Reaches #7 and #8 in a timely manner.

The 2001 Triennial Review identified adoption of TMDLs as Basin Plan amendments the highest priority issue that can be accomplished with current levels of funding. Approximately 0.5 PYs/TMDL would be utilized.

Basin Planning activities will also include continued participation in both internal and external watershed planning efforts and further incorporation of watershed management and principles and watershed-specific priorities into future updates of the Basin Plan, where appropriate.

### **Near-term Activities**

Specific resource needs are described in the Region-wide Section of this document.

A preliminary review of resources for core regulatory activities against cost factors has determined that our region is seriously underfunded for our baseline program. We will be seeking more funding for our core program activities.

Future phases of the Santa Clara River Enhancement and Management Plan effort, to be carried out over the next one-to-five years, involve completion of the GIS overlay analysis, preparation of the Draft Plan, environmental and public review of the Draft Plan, publication of a Final Plan, and acquisition of funding for Plan implementation. Regional Board staff involvement will continue.

Our efforts to involve stakeholders shall also include exploration of funding options (especially for implementation of nonpoint source measures) and continuation of other outreach activities, such as speeches, meetings, and participation in environmental events. We shall continue out

involvement in the watershed group's efforts to develop and implement a watershed management plan.

We are also proposing increased efforts in oversight and management of ground water resources. However, staff involvement in voluntary resolution of nonpoint source problems (Tier I) requires more resources than a regulatory-based approach. Tier II (regulatory encouragement) activities over the long-term include tracking nonpoint source inputs by supplemental databases such as DPR and the Department of Food and Agriculture (DFA), as well as increased sampling of the receiving water for contaminants of concern and toxicity. Tier III (effluent limitations) activities over the long-term include sampling, inspecting, and permitting priority contributors of contaminants of concern in watersheds not fully implementing a stakeholder-driven watershed approach.

We will maintain involvement with stakeholder activities and pursue funding options, especially those involving implementation of nonpoint source measures (coordinate 205(j) and 319(h) activities) as well as other outreach activities such as speeches, meetings, and participation in environmental events. With additional resources we propose conducting a number of education and outreach activities including holding regional workshops and conferences with other Regional Boards as well as experts in the field. We also propose further refining our agricultural strategy to clearly delineate our goals and objectives with regards to reducing nonpoint source pollution from this sector and potential triggers for moving through the tiers.

The complexity of this watershed system, coupled with divergent goals among upstream developers, downstream farmers, and environmental interests, necessitate that extra planning resources be allocated to this watershed. It is imperative that the Regional Board actively participate in dialogue regarding water quality issues during the near-term, to ensure proper planning and development of the long-term projects that are being proposed. Among the various approaches that will be taken by the Regional Board is more active participation in CEQA and other planning efforts in this watershed to ensure protection of this valuable water resource, especially in light of the high growth projections in the floodplains and recharge areas of this watershed.

### **Potential Mid- to Long-term Activities**

- Evaluation of potential impacts from mining in and around the river
- Evaluation of impacts from large-scale development in the upper river
- Identification of conflicts between ground water supply and water quality in lower watershed
- Identification of water quality and quantity issues for steelhead trout recovery
- Consideration of TMDL-related issues
- Implementation of watershed-wide biological monitoring which is a long-term goal for all of our watersheds